DOCUMENT RESUME

ED 290 562 PS 017 109

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TITLE Developing a Research Agenda for Early Childhood Education: What Can Be Learned from the Research on Teaching?
INSTITUTION ERIC Clearinghouse on Elementary and Early Childhood Education, Urbana, Ill.
SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE 88
CONTRACT 400-86-0023
NOTE 36p.
PUB TYPE Information Analyses (070) -- Information Analyses - ERIC Information Analysis Products (071)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Classroom Techniques; Decision Making; *Educational Practices; Educational Research; Elementary Education; Individual Development; *Kindergarten; Learning; Literature Reviews; Outcomes of Education; *Preschool Education; *Research Needs; Teacher Behavior; *Teacher Influence; Teacher Role
IDENTIFIERS Context Effect

ABSTRACT

The purpose of this paper is to review the research literature on effects produced by elementary school teachers and to identify implications of the findings for the early education of children prior to the first grade. Current issues in the research on teacher effects are discussed under the following headings: (1) teachers do make a difference; (2) learning occurs in multiple contexts; (3) students are active participants; (4) teachers are decision-makers; and (5) uses of the research on teaching. The review indicates that current research on teaching can inform early educators and researchers about the complexities of teaching and learning, and the importance of the teacher role. Implications are discussed in terms of purposes of early education, relevant findings from the research on teaching, and relevant considerations for developing a research agenda for early education. Such considerations include the role of learning in development, the impact of different early childhood contexts, the changing nature of the child, and the changing nature of the teacher as decision-maker. It is argued that early education needs to move beyond its psychological and theoretical basis to develop an empirical base specific to early education in order to verify the assumptions early childhood makes about meaningful teacher practices. A 79-item reference list concludes the document. (RH)

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DEVELOPING A RESEARCH AGENDA FOR EARLY CHILDHOOD EDUCATION: WHAT CAN BE LEARNED FROM THE RESEARCH ON TEACHING?

Stacie G. Goffin

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Developing a research agenda for early childhood education: What can be learned from the research on teaching?

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Abstract

Research on teacher effects has been a major area of investigation during the past decade and has become an important component of discussions addressing the quality of schooling. This review synthesizes current knowledge about teacher effects at the elementary school level and examines the findings for their implications to early education. Current research on teaching can inform early childhood educators and researchers about the complexities of teaching and learning, and the importance of the teacher role. Most importantly, the comparison highlights the distinctive characteristics of early education and the need for early education to develop its own research agenda.

Developing a research agenda for early childhood education:* What can be learned from the research on teaching?**

Research on teacher effects and student outcomes has been a major area of investigation during the past decade and has become an important component of discussions addressing the quality of schooling. Much of this research has occurred in elementary classrooms and has attempted to identify the behaviors of teachers that result in increased student achievement. Examining the meaning of this research to early education is now especially relevant because of the growing professionalization of our field and the recent presentation by the National Association for the Education of Young Children (NAEYC) of its Position Statement on Developmentally Appropriate Practice in Early Childhood Programs Birth Through Eight (NAEYC, 1986a) and its companion position statement on appropriate programs and practice for three and four year olds (NAEYC, 1986b). These position statements imply a consensus by early childhood professionals about effective classroom practices and teacher interaction styles. However, there is limited research explaining how early educators can achieve these results.

This literature review was provoked by the dearth of research on teacher effects in early education in contrast with the wealth of litera-

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*For the purposes of this paper, early childhood education is used interchangeably with the term early education and refers to children's education prior to first grade.

**The author wishes to express her appreciation to Sue Vartuli for her contributions during the early phases of this research and to Marguerite Myers for her continuous input and support.

ture available to elementary educators. Could this knowledge also enrich early education? Consequently, the purpose of this paper is to review the literature on teacher effects and to examine the findings for their implications to early education. In many ways this exploration resembled a cross-cultural study; examining and thinking about the literature appropriate to a different educational context provided numerous opportunities for reflecting about one's own practices and highlighted the differences between the two educational "cultures." Through this research process, the unique differences and issues of early childhood education have been clarified. Examining the research on teaching therefore helps early educators to: 1) learn about teaching behaviors that might help achieve some of the appropriate practices identified by NAEYC (1986a, 1986b), and 2) clarify early education's distinctive intentions and research issues. The major conclusion emphasizes the need for early education to begin to develop its own research agenda.

CURRENT ISSUES IN THE RESEARCH ON TEACHER EFFECTS

Recent research on teacher effects has focused on explaining the relationship between classroom processes (usually teacher behavior) and educational outcome (usually measured by achievement tests). The opportunity to apply the findings to educational decision-making--and potentially to increased student achievement and teacher accountability--has fueled the continuation of process-product research (Zumwalt, 1982). Current findings from this research can be organized under four conclusions (Goffin, Vartuli & Myers, 1985) which simultaneously identify important new considerations in the current research on teacher effects. When possible, related research in early education is also described to help define the distinctive characteristics between the two levels.

Teachers do make a difference. This conclusion has supported the continued interest and excitement in teacher research. Teachers make a difference when they are effective managers who use active teaching strategies. Management and teaching are mutually supportive because organizational skills impact both management and instruction. The key to effective management lies in maintaining smooth classroom flow and student involvement with learning (Brophy, 1982, 1983; Good, 1983; Brophy & Good, 1986; Good & Brophy, 1984; Kounin, 1970).

Active teaching describes the teacher's direct involvement in presenting concepts, explaining the meaning of these concepts, providing appropriate practice activities, and monitoring those activities prior to assigning independent seatwork. Effective teachers explicitly tell students how to accomplish academic work and do not rely upon printed materials to serve as vehicles of instruction (Brophy, 1979; Good, 1983; Brophy & Good, 1986; Good & Brophy, 1984).

Successful elementary teachers use direct teaching as a major instructional strategy when teaching basic academic skills and increase the amount of time students spend engaged with learning tasks (Brophy, 1979; Good, 1983). They expect children to learn, and their teaching reflects this expectation (Brophy, 1983; Good & Brophy, 1984). Little information exists about the conditions associated with achievement areas other than basic skills (Brophy, 1979; Good, 1983). Of importance to early educators is the agreement among researchers that cognitive and affective outcomes require different teaching behaviors and involve judgmental decisions about one's priorities. Different learning objectives require different instructional methods (Good & Brophy, 1984).

The importance of early childhood teaching behaviors has also been confirmed (Feeney & Chun, 1985; Phyfe-Perkins, 1981). From her comprehensive review, Phyfe-Perkins (1981) concluded that effective preschool teachers are encouraging, have positive styles of interaction, are involved with children's activities rather than directive teaching, and are child-centered in their approach. Feeney and Chun's (1985) update resulted in similar conclusions. In contrast to the research on teaching, the importance of direct instruction is minimized; however, the generality of the findings limit their ability to inform early childhood practice.

Learning occurs in multiple contexts. Researchers are beginning to accept and understand that teaching-learning contexts impact what is learned. Contexts can vary with: grade level, subject matter, teaching behaviors (lecture, discussion, questioning, etc.), instructional strategies (whole group, small group, seatwork, etc.), nature of the learning task, and the organizational structure of classrooms (Berliner, 1983; Good, 1983; Doyle, 1983, 1985; Stodolsky, 1984). Classrooms are now being studied in terms of their various settings and types of interactions.

These different contexts result in different teaching and learning situations for teachers and students. Different contexts structure what is learned and how it is learned (Berliner, 1983; Good, 1983; Doyle, 1983, 1985). Consequently, the search for generic teaching behaviors no longer dominates the research on teaching (Brophy, 1982; Good, 1983; Good & Brophy, 1984). Effective teaching is no longer being characterized by a single set of behaviors that are context free; rather teaching is being understood as context bound (Brophy & Good, 1986; Stodolsky, 1984).

In early childhood education, the influence of various contexts has been examined primarily through comparisons of program models. Program differences reflect different assumptions about how children learn and the role of the teacher in guiding or structuring the learning process; the teaching techniques used are related to the goals and content of the program. Program models, therefore, provide a particular context for teaching (Miller, Bugbee & Hypertson, 1985). Comparisons of program models have generally found that different models produce results consistent with their different objectives (Evans, 1975; Powell, 1986; Stallings & Stipek, 1986).

Comparisons of program models is almost entirely an early childhood phenomenon (Follow Through Programs are being encompassed by this statement because they were conceived and developed as extensions of early education programs). This fact highlights one of the important differences between early childhood and elementary curriculums. Early childhood educators continue to have considerable flexibility in determining both their objectives and curriculum; elementary educators, for the most part, have their objectives and curriculum determined for them by state departments of education and local school boards. Consequently, the role of the early educator as decision maker is considerably broader than that of the elementary teacher.

Students are active participants. Several studies have investigated the impact of student interpretations upon learning (Brophy, 1981; Doyle, 1983; Marshall & Weinstein, 1984; Marx, 1983; McDermott, 1977; Weinstein, 1983) and concluded that student perceptions of teacher behaviors, learning contexts, social relationships, and the learning task influence student behavior. In other words, students are interpreters of their

experiences, and student perceptions of teacher intentions and expectations can influence the effectiveness of teacher instruction and reinforcement (Brophy, 1981; Marshall & Weinstein, 1984). These studies of student perceptions have investigated the child's interpretive role as pupil, however, rather than the child as learner and developing individual which is early education's emphasis. Because young children's interpretations of their experiences are influenced by their preoperational cognitive structures (Piaget & Inhelder, 1969, Donaldson, 1978), understanding young children's perceptions of their experiences must necessarily be critical for early educators.

Berliner (1986) identifies subject matter knowledge and knowledge of classroom management and organization as the two key areas of teacher expertise. Paley's (1986) self-study of her nursery school classrooms, however, details preschool children's unique ways of thinking and the importance of trying to understand children's perspectives. Her findings that teacher's and children's premises are often mismatched underline children's development as a critical consideration in providing meaningful early education and as an important component of teacher expertise in early childhood education (Forman & Kuschner, 1983; Kamii & DeVries, 1978; Paley, 1986). According to Jones (1986), " . . . early childhood is really the only level of education that has taken developmental principles seriously and developed criteria and procedures for active learning" (p. 123). The lack of focus on the influence of child development on teacher behaviors in the research on teaching emphasizes another major discrepancy between the expectations associated with effective teachers in elementary and early childhood education.

Teachers are decision makers. Teachers, as well as students, are becoming recognized as active participants in the teaching-learning process. Teachers are being studied as deliberate decision makers, and the findings suggest that teacher decisions, especially at the beginning of the year, are important to understanding what happens in classrooms (Clark & Yinger, 1980; Putnam, 1984; Shavelson, 1983; Shavelson & Stern, 1981).

Research on teacher thinking is based on the assumption that what teachers do is affected by what they think (Clark, 1978; Clark & Yinger, 1979; Shavelson, 1983). It assumes that in order to understand teaching, one must have an understanding of teachers' goals, judgments, and decisions, especially in relation to teacher behaviors and classroom contexts (Borko, Cone, Russo, Atwood & Shavelson, 1979; Shavelson, 1983). Research on teacher thinking, therefore, is concerned with teacher judgements, decision making, and planning in an attempt to describe how teachers gather, organize, interpret, and evaluate information used for teaching (Clark & Yinger, 1979). Within this framework, teachers are perceived as rational professionals who must carry out their decisions in an uncertain, complex environment.

Because of the complexity of the classroom environment, two major models on teacher thinking have been developed: a decision making model and an information processing model (Clark, 1978). The decision making model focuses on the teacher's conscious deliberations about classroom matters; the emphasis upon deliberate teacher activity makes this model appropriate for situations during which teachers have sufficient time to consciously decide what to do, such as during teacher planning. In contrast, the information-processing model focuses on teachers as coping

with their complex, fluid environment by simplifying it. This model attempts to understand how teachers limit and structure the classroom environment in which they act.

These two models recognize the three phases of teaching: preactive, interactive, and reflective. Teacher behaviors differ during each of these phases (Clark & Yinger, 1980; Shavelson, 1983). From a different organizational perspective, these two models emphasize again the impact of different contexts on teacher behaviors.

During the preactive phase, teachers prepare for their actual teaching. Research on teaching has traditionally focused on the interactive phase, the behaviors demonstrated by teachers during actual teaching; but descriptions of teacher planning document teachers' deliberate structuring of classroom content and organization. During planning, teachers formulate a course of action for carrying out in-struction. Plans become scripts for carrying out teaching and change intentions into actions (Putnam, 1984; Shavelson, 1983). These intentions are guided not only by goals, attitudes, and beliefs but also by the nature of the task and the complexity of the context. Many of these intentions are formulated early in the school year as teachers focus on their framework of rules, routines, schedules, and judgements about students (Clark & Yinger, 1980; Putnum, 1984; Shavelson & Stern, 1981).

During interactive teaching, the teacher's primary focus is maintaining an activity's flow. Once plans are initiated, teachers attend to their mental script, and this focus of attention is broken only when classroom monitoring indicates a potential problem. Teachers attempt to resist these intrusions, however, and these instances are the focus of

their decisions during interactive teaching (Shavelson, 1983; Shavelson & Stern, 1981).

These findings suggest that some of the most important decisions for teachers and students occur during the preactive phase. The reflective phase during which teachers evaluate their plans and accomplishments has received limited study, but according to Shavelson & Stern (1981), it also receives limited attention from teachers. Elementary school teachers appear to give little time to evaluating their efforts and revising them where appropriate. Yet, the importance of teacher reflection is receiving increasing attention from researchers who suggest that teachers' apparent lack of reflection on their teaching indicates a lack of understanding of their role as decision makers (Duckworth, 1986; Yonemura, 1986a; Zeichner & Liston, 1987).

A descriptive study of preschool teachers' planning yielded conclusions consistent with those found with elementary teachers (Hill, Yinger & Robins, 1983), but with some clarifying differences. Conducted in a laboratory preschool, the study observed teachers' planning, studied their plans, and questioned their decisions. Similar to findings with elementary teachers, Hill et al found that teacher planning was a complex cognitive activity that began from a number of different starting points; both elementary and preschool teachers did not usually plan from a set of predetermined educational objectives. McAfee (1985) noted a similar finding from her exploratory study of preschool teachers' planning during circle time.

The teachers studied by Hill et al (1983) were most likely to begin their planning by considering materials or individual student characteristics. The development of individual children versus group objectives

were emphasized. Teachers' plans were often shaped or modified by the availability of materials, an important finding given the dominance of concrete experiences in early education. They also noted that teachers evaluated their daily results in terms of children's interests, involvement, and activity rather than fulfilled, specified objectives. Hill, et al, suggested that the developmental outcomes sought by preschool teachers were not linked to single activities and experiences. Hill, et al, concluded that the teachers' starting points made sense in a preschool context where there was no clear subject agenda. This is an important, distinctive characteristic of early education, but as will be argued later, this does not free early educators from having well-defined educational objectives.

This conclusion is reinforced by Yonemura's (1986b) year long case study of a preschool teacher's thoughtful deliberations connecting her objectives for individual children's development with her planning and interactive teaching. This contrast in teacher planning highlights the importance of child development to teaching in early childhood as well as the impact of a teacher's personal determination of teaching objectives--both of which are given less emphasis in elementary education.

Uses of the Research on Teaching. Many of the research findings about the effects of elementary teachers have been translated into effective teaching behaviors and have become the content for teacher education and staff development programs. Zumwalt (1982) and Darling-Hammond (1985) call this linear process of directly reinterpreting research results into teacher practices a technological orientation.

This review of the literature, however, reveals the complexity of teaching and learning. The findings imply the over-simplification of generic teaching skills, the impact of different teaching-learning contexts, and the active involvement of both teachers and students in the teaching-learning process. As a consequence, research on teaching has been criticized for assuming that knowledge about effective teaching can be transformed into production rules for making teachers more effective (Fenstermacher, 1979; Macmillan & Garrison, 1984; Shulman, 1987; Stodolsky, 1984; Zumwalt, 1982, 1986).

According to critics, the single-minded focus on teacher behaviors has overlooked the context and content of teaching; the assumption that teaching behaviors cause student achievement has ignored the fact that teaching is an intentional activity (Macmillan & Garrison, 1984). This has become an increasingly popular perspective to the extent that Brophy and Good (1986) suggest that the term "teacher effects" versus "teacher effectiveness" be used to describe findings from the research on teaching. The more neutral wording attempts to acknowledge that teacher effectiveness is a reflection of teacher purposes and values as well as teacher knowledge.

In this view, teachers do not become more effective merely by acting differently toward students; if this were so, teaching would simply be a technical vocation (Darling-Hammond, 1985). It is argued instead that teachers become more effective by thinking and feeling differently about what makes the activity of teaching worthwhile (Fenstermacher, 1979; Zumwalt, 1986). Within this orientation, findings from process-product research--and any other research--become sources of knowledge for

reflection and judgement (Fenstermacher, 1979; Zumwalt, 1982, 1986); it is this aspect that defines the professional activity of teaching.

This suggests that a critical difference in emphasis between the two orientations to the research on teaching also exists in the phases of teaching which are their focus. Research on teaching has primarily focused on interactive teaching as the time when effective teaching takes place. But this would now appear to be too limited in scope. Effective teaching at any level occurs not only during teacher-student interaction but also during teacher planning and reflection, the first and third phases of teaching. "To improve education, therefore, one educates teachers in a way that enhances their deliberation about teaching. The potential for growth never ends as one continues to reflect on one's own experiences" (Zumwalt, 1982, p. 225).

This reassessment of the meaning of findings from the research on teach-ing presents new learning opportunities for early childhood teachers. Early education has different contexts, content, beliefs, and goals than primary education. If findings from the research on teaching were to be interpreted as prescriptive statements about effective teaching, most early educators would reject them as irrelevant to the purposes of early childhood education. However, the emergence of an alternative interpretation of the findings suggests that the research on teaching can provide early educators with a source of information on how to instruct more effectively, as well as provide a backdrop to illuminate early education's distinctive characteristics: the relevance of child development to curriculum planning, differences in the prioritization of teaching-learning goals, and greater teacher freedom to determine program content and objectives.

IMPLICATIONS FOR EARLY EDUCATION

Early Childhood Purposes

As represented by NAEYC's position statements (1986a, 1986b), a primary tenet of early childhood education is its focus on social-emotional growth and the child's construction of knowledge. Growth in early education has rarely been limited to academic achievement though there are exceptions e.g. the programs of Bereiter and Englemann (1966) and Bushell (1982). Instead, curriculums have stressed open-ended activities that encourage and support objectives such as problem solving, creativity, self-esteem, positive social behaviors, and individual uniqueness in addition to the transmittal of knowledge (Weber, 1984; Zimiles, 1986). Furthermore, curriculums are couched in an awareness that young children's learning and development is qualitatively different than that of elementary school children (Elkind, 1986; Kamii & DeVries, 1978). It is argued that young children learn through opportunities for active, physical involvement with materials and people that can stimulate mental activity (Forman & Fosnot, 1982; Forman & Kuschner, 1983; Kamii & DeVries, 1978). The mental stimulation provided by direct instruction however, tends to disregard children's needs for meaningful experiences prior to discussion of abstractions (Elkind, 1986; Kamii, 1981; Stewart, 1985; Willert & Kamii, 1985).

It is physical knowledge activities and meaningful play and experiences that provide the vehicle for early educators' quest for questioning, resourceful, cooperative behaviors and conceptual understandings. Physical-knowledge and play activities provide opportunities for children to construct new relationships and logical-mathematical understandings via their active participation with objects and people (Forman & Kuschner, 1983; Kamii & DeVries, 1978; Rubin, Fein, & Vandenburg, 1983).

Consequently emphasis has been traditionally placed upon learner activity within a developmental framework rather than teachers' instructional behaviors.

These beliefs, in conjunction with children's developmental abilities, provide a distinctive context for early education and a different prioritization of educational goals. Katz's (1984) discussion of professional early childhood teacher behaviors emphasizes the unique context and goals of early educators' decision making: peer squabbles, toy sharing, turn-taking, etc.

The common thread that links most early educators is their shared philosophical beliefs about the purposes of early childhood education. It is in the expression of these values that early education distinguishes itself from primary education. As Glickman (1984) argues in his explanations for the absence of play in public schools, the exclusion of play is a philosophical decision that reflects schools' emphasis on achievement gains. Conversely, the dominance of play and constructive activity in traditional early childhood classrooms reflects early childhood's respect for child development and value of individuality, personal competence, and learner activity. These distinctive purposes make it unlikely that the current research on teaching could be blindly imported for early education.

Relevant Findings from the Research on Teaching.

Early education's goals extend beyond positive social-emotional development and the child's construction of knowledge. Early educators also want young children to learn information about holidays, the names of colors and numerals, and facts about changing seasons, etc. all of which fall under the category of social knowledge. In contrast to physical and logical mathematical

knowledge, social knowledge requires specific information from the external world and is dependent upon people as its primary source. Imparting social knowledge, therefore, often relies upon direct instruction. The research on teaching, therefore, can be a valuable resource in understanding how to actively present information--rather than rely on worksheets--(Brophy, 1979; Good, 1983; Brophy & Good, 1986), assess learning (Brophy, 1979; Brophy & Good, 1986) and provide meaningful feedback (Brophy, 1981). In addition, early educators are instrumental in providing repeated access to the kinds of experiences and practice opportunities that promote children's emerging skills, e.g., skipping and cutting with scissors. The research on teaching specifically discusses the importance of focused practice. (Brophy, Good, 1986)

Early education, obviously, also occurs in groups and therefore has much to learn from the research describing effective organizational and management skills (Brophy, 1983; Doyle, 1985; Kounin, 1970)--though it must be remembered that elementary classrooms are traditionally organized and managed for different purposes. McAfee (1985) provides an example of this possibility in her application of many of these findings in her recommendations for improving the quality and meaningfulness of circle time, a traditional component of many early childhood programs, e.g., how to maintain activity flow, monitor group activity, actively teach new information, etc.

Applying findings from the research on teaching, however, requires two things of early educators: 1) remembering that these findings are a source of information for teacher decision-making rather that guaranteed effective teacher strategies and 2) understanding the distinctions between social knowledge and physical and logical-mathematical knowledge.

The findings from the research on teaching are most relevant to transmitting social knowledge, teaching skills, and providing effective classroom management. Because of the distinctive characteristics of early education, however, the research on teaching provides little support on how to achieve some of early education's most important cognitive and social-emotional objectives.

Developing A Research Agenda for Early Education: Relevant Considerations.

Considering the role of learning in development. Most importantly, the research on teaching demonstrates that teachers and the way they teach make a difference. Early education has tended to rely upon psychological theory and philosophical beliefs as a basis for its decisions on teaching (Kamii, 1985; Weber, 1984). When research informs early childhood practice, it is primarily from psychological, rather than educational, research that early educators infer appropriate practices (See for example Moore & Cooper, 1982; NAEYC, 1986a; Spodek, 1982). Consequently, as Bartlett (1981), bemoans, "At present, conscientious teachers must rely, (as they always have) on intuition and their previous teaching experience" (p. 44) (parenthesis in original).

The professionalization of early childhood education requires empirical support for the hypothesized relationships between teacher behaviors and child outcomes that have been inferred from its psychological and theoretical underpinnings. Fein and Schwartz (1982) call this missing link a theory of practice. Although developmental theories offer general statements about experiences and why they work the way they do, they do not explain how to modify or generate desired outcomes. A theory

of practice, on the other hand, would be concerned with how to maximize the role of the environment in development (Fein & Schwartz, 1983).

The definition of development supports the need for a theory of practice. Children's development is maximized in early education not only when children's maturational capabilities are respected but when the classroom environment (including teacher behavior) is optimal. It is time for early education and its research, therefore, to focus its attention more directly on the learning aspect within development. A theory of practice must be informed by research on teaching specific to early education.

> All educational programs are concerned with imparting some form of knowledge to those who participate in them. This is as true for early childhood programs as for programs at higher levels of schooling. Often it seems that early childhood educators are less concerned about the knowledge we are imparting to young children than about other aspects of the program, especially the program's effect on children's development and the need to nurture children and provide for their basic care. Programs are described in relation to development principles rather than in relation to learning. Too often this obscures the fact that there are things that young children come to know as a result of participating in early childhood programs (Spodek, 1986, p. 38).

Durkin's (1987) recent study of kindergarten teachers reinforces this point. "To judge from the interview data, the most developmentally oriented teachers . . . would not be even slightly affected by impeccable research data that contradicted their beliefs. Listening to them assign special importance to maturation and 'additional time' as solutions for learning was reminiscent of articles that describe the 1930's . . ." (p. 768).

Comparisons of program models confirm that programs with different learning objectives produce different results (Powell, 1986; Stallings &

Stipek, 1986). A recent finding is that programs emphasizing didactic approaches may have harmful effects (Powell, 1986; Schweinhart, Weikart & Larner, 1986). Although in need of much careful study, this suggestive finding provides initial empirical support for NAEYC's (1986a) position in favor of a more child-centered approach to early education.

A major weakness of curriculum comparison studies, however, is that they confound content, activities, and materials with teacher behaviors (Miller et al, 1985; Powell, 1986). Consequently, while these studies provide understandings about program consequences, they do not explain how preschool programs achieve their effects. They do not specifically inform early educators how they might become more effective components of the developmental equation (learning + maturation = development). This is exacerbated by the fact that most of the comparative research on program models involve children from low income black families, severely limiting its generalizability to other populations of young children (Powell, 1986; Stallings & Stipek, 1986).

Teaching in early childhood programs does not usually rely upon carefully structured, hierarchical learning--which is the primary curriculum context for the research on teaching. Therefore, the ways in which early educators can provide young learners with what Bereiter (1985) calls "bootstraps" to use in their construction of more complex cognitive structures needs to be examined. Duckworth (1986) poses the teacher as researcher asking "How does a child understand this? How can this child's thinking be challenged to consider other possibilities?" For early educators, these teaching opportunities are not limited to cognitive development; they also extend to the social-emotional realm. What do early educators need to know to be able to achieve this?

Also needed are studies that examine the ways in which the structure of a task influence teaching and learning (Doyle, 1983) because the tasks of early education differ considerably from those emphasized in primary education. Findings from these kinds of studies can help inform early educators how to facilitate greater cognitive competence as defined by early childhood education. Early education's concerns with social and emotional competence demands that the effects of teacher behaviors in these areas of development also be studied more systematically.

Considering the impact of different early childhood contexts. Research on teacher effects in early childhood needs to recognize that early education is comprised of many different program contexts e.g. child care, preschool education, Head Start, and kindergarten. These different settings provide not only different contexts for early education but often different purposes; based upon the findings from program models research and the research on teaching, these differences should influence teacher and child behaviors. Yet, Caldwell (1987), for example, argues that there are no differences between child care and preschool education except the length of the day leading her to now rely upon the terms half-day and full-day care versus the terms child care and preschool education. This distinction (or lack of) is more than just an issue of semantics, and it needs to be directly addressed--both conceptually and empirically (Goffin, in preparation). The effects of different program settings and intentions need to be a component of any research on teaching in early childhood.

Considering the changing nature of the child. The impact of the changing character of young children is also a relevant variable.

Current recommendations for practice are based upon family characteristics and social contexts for development that are no longer dominant. Zimiles (1986a) describes the ways young children are changing and challenges early educators to question the implications of his findings (Zimiles, 1986b, 1986c). For example, Zimiles questions whether early educators should continue to encourage peer interactions because of his findings that contemporary children are less responsive to adults (Zimiles, 1986c). Or do we just need to encourate different kinds of peer relationships that promote cooperative interactions (Goffin, 1987)? The changing character of children may require new kinds of teacher-child interactions in early childhood programs.

Considering the changing nature of the teacher as decision-maker. Focusing on teacher behaviors requires early educators be given more recognition as decision-makers. The research on teacher thinking in both elementary and early education supports the importance of teacher decisions on classroom life (Clark & Yinger, 1980; Hill, et al., 1985; Putnum, 1984; Shavelson, 1983; Shavelson & Stern, 1981; Shulman, 1987; Yonemura, 1986b). Teacher decision-making assumes a different complexion in early education, however, because of the variety of program models available to early educators, the greater diversity of teaching-learning experiences that comprise early education, the absence of a prescribed curriculum, and the diffuse goals that characterize early childhood programs.

More understanding is needed about early childhood teachers' thinking and decision-making. Shulman (1987) makes the interesting point that teaching as an occupation and profession lacks a history of practice--that no "collective memory" of teachers' best practices exist

(such as architectural plans and buildings, legal case studies or medical records). Consequently, Shulman suggests that a major component of the next decade's research agenda needs to focus on collecting and interpreting the practical knowledge of teachers.

The current focus on teacher thinking and reflection directly leads to the issue of teacher preparation. It is becoming increasingly evident to many teacher educators that the constructive process is not limited to young children (Duckworth, 1986; Fenstermacher, 1979; Jones, 1986; Yonemura, 1986a; Zeichner & Liston, 1987; Zumwalt, 1982, 1986). Shulman (1987) argues that teaching can best be understood "as comprehension and reasoning, as transformation and reflection" (p. 13). Consequently, it is argued that teacher education programs need to be focusing not only on teachers' technical skills but also providing opportunities for prospective teachers to become more active thinkers and participants in their professional development. Ironically, this recommendation will place many early childhood teacher educators in the same position as kindergarten teachers who are forced to justify their inappropriate practices because of school settings which are resistive to an appropriate early childhood curriculum!

However, many early educators are unaware of the inappropriateness of their practices or are unable to defend appropriate practices to parents and supervisors (Durkin, 1987; Smith, 1986). These findings, in conjunction with teachers' apparent inattention to objectives during planning and to the reflective phase of teaching, as cited earlier, suggest that many teachers are operating at a level of what Zeichner and Liston (1987) describe as technical reflectivity. At this level, the dominant concern is with efficiently and effectively applying educational

knowledge without questioning the anticipated outcomes. In contrast, the case studies conducted by Putnum (1984), Shulman (1987), and Yonemura (1986b) suggest that teachers with greater understandings about their professional knowledge base are more reflective and more likely to consciously influence their interactive teaching. Consequently, studies of early childhood teachers' thinking need to consider the educator's knowledge (not just years of professional education) as a relevant variable, and secondly, early education's research on teaching must acknowledge from its earliest beginnings the relevancy of teacher knowledge and reflection in conjunction with teacher skills.

It is not necessary for researchers in early education to start from scratch in developing a new research agenda. The research on teaching in the primary grades now has a history. Researchers in early childhood education can learn from these experiences and from the insights of current researchers. The most recent Handbook of Research on Teaching (Wittrock, 1986) reveals the wealth and depth of research experiences that can be adopted and/or adapted in developing early education's own program of research.

Summary and Conclusion

The recent research on teaching has been reviewed and its findings examined for implications for early education. In the area of instruction and classroom management, early educators will find considerable relevant information about effective teaching practices.

The review also highlighted early education's distinctive characteristics and issues and the need for the field to develop its own body of research on teaching. Whereas the recent research on teaching is criticized for lacking a theoretical framework for explaining its results

and not including a justification about what is worth teaching or knowing (Fenstermacher, 1979; Macmillan & Garrison, 1984; Zumwalt, 1982), early education needs to move beyond its psychological and theoretical basis to develop an empirical base specific to early education to verify its assumptions about meaningful teacher practices.

Paradoxically, at a time when elementary teachers are best informed about effective practices, they are complaining about the lack of opportunity to make informed, professional decisions because of organizational constraints (Darling-Hammond, 1985; Zumwalt, 1986). In contrast, most early education remains free of a dictated curriculum and organizational structure; early educators still retain the freedom to act as autonomous decision-makers. To fulfill this responsibility, however, they need relevant research on teaching to help inform their decision-making and professional practices to help ensure the continuation of the distinctive purposes of early education.

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